

Amendments to the Claims:**Listing of Claims:**

1. (Currently amended) A method for the production of acrylic acid which comprises the steps of:

(a) supplying one or more gas components selected from the group consisting of propylene, propane and acrolein to a reactor for catalytic gas phase oxidation,

(b) obtaining an acrylic acid-containing gas by catalytic gas phase oxidation,

(c) introducing said acrylic acid-containing gas and supplying an aqueous absorbing solvent into an acrylic acid absorbing column, whereby an aqueous acrylic acid-containing solution is absorbed onto said acrylic acid absorbing column.

(d) obtaining said aqueous acrylic acid-containing solution absorbed onto said acrylic acid absorbing column,

(e) obtaining crude acrylic acid from said aqueous acrylic containing solution in an azeotropic dehydration column by dehydration;

(f) introducing a polymerization inhibitor to said azeotropic dehydration column at any point between a point for supplying said aqueous acrylic acid containing solution and a point for supplying a reflux and not including the point for supplying said aqueous acrylic acid containing solution material and the point for supplying the reflux;

(g) and/oroptionally removing a low boiling substance from said aqueous acrylic acid-containing solution by using an azeotropic distillation column,

(h) obtaining acrylic acid and a high boiling substance-containing solution by removing the high boiling substance from said crude acrylic acid, and subsequently

(i) recovering acrylic acid by thermally decomposing an acrylic acid oligomer contained in said high boiling substance-containing solution, and

~~performing the step of introducing a polymerization inhibitor to at least one distillation column selected from the group consisting of an acrolein separation column, an azeotropic dehydration column, a heavy ends cut column, maleic acid separation column, an acetic acid separation column, and a purifying column at any point except at a stop for supplying a raw material which is complying acrylic acid containing liquid to the at least one distillation column,~~

and also at any point except the step for supplying a reflux to the at least one distillation column.

2. (Currently amended) A method according to claim 1, which further comprises performing the following step (iii) and/or (iv) of;

(iii) a step for supplying a polymerization inhibitor containing solution together with an acrylic acid containing solution with an atomizing injecting means,

(iv) a step for thermally decomposing the oligomer contained in said high boiling substance-containing solution thereby lowering the concentration of maleic acid contained in the recovered acrylic acid solution to a level of not higher than 5 wt. %.

3. (Currently amended) A method according to claim 1, which further comprises the steps of;

(hj) for esterfying the acrylic acid obtained in said step (gi) thereby producing an acrylic ester, or

(ik) for further purifying the acrylic acid obtained in said step (gi) thereby obtaining acrylic acid of high purity.

4. (Currently amended) A method according to claim +3, further comprising the step of cooling the aqueous acrylic acid-containing solution in a tank and/or a cooler between said steps (b) - (ik) and the subsequent step.

5. (Currently amended) A method for the production of a polyacrylic acid or salt thereof characterized by producing said polyacrylic acid or salt by using the acrylic acid of high purity obtained at the step (ik) set forth in claim 3 in a polymerization process.

6. (Currently amended) A method according to claim 5, further comprising the step of cooling the aqueous acrylic acid-containing solution in a tank and/or a cooler between said step (ik) and a step for producing the polyacrylic acid or salt.

7. (Currently amended) A method for the production of a polyacrylic acid or salt thereof, characterized by producing said polyacrylic acid or salt by using the acrylic acid of high purity obtained at the step (ik) set forth in claim 4 in a polymerization process.

8. (Previously presented) A method according to claim 1, wherein said distillation column is at least one member selected from the group consisting of the azeotropic dehydration column, the heavy-ends cut column and the maleic acid separation column.

9. (Previously presented) A method according to claim 1, wherein said distillation column is at least one member selected from the group consisting of the azeotropic dehydration column and the heavy-ends cut column.

10. (Currently amended) A method according to claim 1, wherein said thermal decomposition of the acrylic acid oligomer to acrylic acid in the step (xi) is carried out at a temperature of 120° - 220°C.

11. (Previously presented) A method according to claim 1, wherein said thermal decomposition of the acrylic acid oligomer is carried out in a thermal decomposition vessel.

12. (Currently amended) A method for the production of the acrylic acid which comprises the steps of:

(a) supplying one or more gas components selected from the group consisting of propylene, propane and acrolein to a reactor for catalytic gas phase oxidation,

(b) obtaining an acrylic acid-containing gas by catalytic gas phase oxidation,

(c) introducing said acrylic acid-containing gas and supplying an aqueous absorbing solvent into an acrylic acid absorbing column, whereby an aqueous acrylic acid-containing solution is absorbed onto said acrylic acid absorbing column,

(d) obtaining said aqueous acrylic acid-containing solution absorbed onto said acrylic acid absorbing column,

(e) obtaining crude acrylic acid by dehydration and/or removing a low boiling substance from said aqueous acrylic acid-containing solution which dehydration is performed at the azeotropic dehydration column,

(f) obtaining acrylic acid and a high boiling substance-containing solution by removing the high boiling substance from said crude acrylic acid, and subsequently

(g) recovering acrylic acid by thermally decomposing an acrylic acid oligomer contained in said high boiling substance-containing solution, and

(h) supplying the acrylic acid recovered by thermally decomposing said acrylic acid oligomer from step (g) to said azeotropic dehydration column.

13. (Currently amended) A method according to claim 12, which further comprises performing the following steps (iii) and/or (iv);

(iii) a in said step for supplying of introducing a polymerization inhibitor to said azeotropic dehydration column comprises introducing a polymerization inhibitor containing solution together with an said acrylic acid-containing solution with using an atomizing injecting means,

(iv) a step for thermally decomposing the oligomer contained in said high boiling substance-containing solution thereby lowering the concentration of maleic acid contained in the recovered acrylic acid solution to a level of not higher than 5 wt.%.

14. (Currently amended) A method according to claim 11, which further comprises the steps of;

(i) for esterfying the acrylic acid obtained in said step (g*i*) thereby producing an acrylic ester, or

(j) for further purifying the acrylic acid obtained in said step (g*i*) thereby obtaining acrylic acid of high purity.

15. (Currently amended) A method according to claim 14, further comprising the step of cooling the aqueous acrylic acid-containing solution in a tank and/or a cooler between said steps (b)-(i*k*) and the subsequent step.

16. (Previously presented) A method for the production of a polyacrylic acid or salt thereof characterized by producing said polyacrylic acid or salt by using the acrylic acid of high purity obtained at the step (j) set forth in claim 14 in a polymerization process.

17. (Previously presented) A method according to claim 16, further comprising the step of cooling the aqueous acrylic acid-containing solution in a tank and/or a cooler between said step (j) and a step for producing the polyacrylic acid or salt.

18. (Previously presented) A method for the production of a polyacrylic acid or salt thereof, characterized by producing said polyacrylic acid or salt by using the acrylic acid of high purity obtained at the step (j) set forth in claim 12 in a polymerization process.

2019. (Currently amended) A method according to claim 14, further comprising the steps of introducing polymerization inhibitor to the azeotropic dehydration column, at any point (or site) except at the step (or point or site) for supplying a raw material to the azeotropic dehydration column and at the step (or point or site) for supplying a reflux.

2420. (Currently amended) A method according to claim 20, wherein said raw material is complying acrylic acid-containing liquid.

21. (New) A method according to claim 1, wherein said polymerization inhibitor is fed into the azeotropic dehydration column by dissolving the polymerization inhibitor into the aqueous acrylic acid-containing solution.

22. (New) A method according to claim 1, further comprising a step of introducing a polymerization inhibitor to a heavy ends cut column used in step (h).

23. (New) A method according to claim 1, wherein said acrylic acid-containing aqueous solution is cooled to 20° - 50°C before feeding to the azeotropic dehydration column.

24. (New) A method according to claim 1, wherein a concentration of a bottom liquid of the azeotropic dehydration column is not more than 5% by weight.

25. (New) A method according to claim 1, wherein said acrylic acid obtained in the step (i) is returned to the azeotropic distillation column.

26. (New) A method according to claim 1 wherein in said step of introducing a polymerization inhibitor to said azeotropic dehydration column comprises introducing a polymerization inhibitor containing solution together with said acrylic acid containing solution using an atomizing injecting means.